



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/694,153

10/27/2003

Eric Edward Lennon

KCX-1359 (18231)

3016

7590  
Mr. Stephen E. Bondura  
Dority & Manning, P.A.  
P.O. Box 1449  
Greenville, SC 29602

03/03/2009

EXAMINER

BUTLER, PATRICK NEAL

ART UNIT

PAPER NUMBER

1791

MAIL DATE

DELIVERY MODE

03/03/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/694,153	<b>Applicant(s)</b> LENNON ET AL.	
	<b>Examiner</b> Patrick Butler	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 13-23 is/are pending in the application.
- 4a) Of the above claim(s) 6-10 and 17-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 11, 13-16 and 23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                         |                                                                             |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                                |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____                                                             | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 23 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

With respect to Claim 23, the claim requires the force of attenuation to be provided “air consisting of attenuation air only entering... from the drawing slot sidewall opposite....” The Examiner interprets this claim language to mean that no other attenuation air may contribute to the attenuation force. The Specification's teaching is limited to requiring that some air come from only the opposing sidewall (see Specification, page 20, lines 24 and 25). Since Claim 23 does preclude additional attenuation air the Specification does not preclude additional attenuation air, the claim is therefore beyond the scope of the originally filed Specification. Even if the specification is held to indicate only one sidewall providing attenuation air, the specification does not preclude any other source of attenuation air as claimed with the closed claim language of “consisting.” For clarity, the following chart shows Claim language and Specification language and the corresponding bounds of the claim and scope of the Specification.

	Claim 23	Applicant's Specification
Interpreted text	"...wherein the pneumatic attenuation force is provided by air consisting of attenuation air only entering the drawing slot from the drawing slot sidewall opposing the drawing slot sidewall upon which the electrostatic charging unit is located." (Claim 23, lines 14-16)	"...utilizing attenuation air entering the fiber drawing unit only from the opposing sidewall of the attenuation chamber or fiber drawing slot." (see Specification, page 20, lines 24 and 25)
Examiner's Interpretation	Only air from the opposing sidewall may be present; there may be no other attenuation air present than the air coming from the opposing sidewall. The term "consisting" precludes other attenuation air from being present.	There must be at least some attenuation air present which only came from the opposing sidewall.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to

Art Unit: 1791

be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 11, and 23 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1 of copending Application No. 10/687,006. Although the conflicting claims are not identical, they are not patentably distinct from each other because they claim forming fiber, redirecting it, which would include electrostatically, and forming a web.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1, 11, and 23 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 5, and 11 of U.S. Patent No. 7,488,441 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because they claim forming fiber, electrostatically directing it, and forming a web.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haynes '071 (WO 02/52071) in view of Maggio '134 (WO 00/65134 A1; US Patent No.

Art Unit: 1791

6,966,762 B1 relied upon for translation and citations) and Epstein et al. (US Patent No. 3,052,009).

With respect to Claim 1, Haynes '071 teaches providing a plurality of fibers 12, subjecting the fibers to a pneumatic attenuation force in a drawing slot 14, the attenuation force imparting a velocity to the fibers, subjecting the fibers to an applied electrostatic charge before the fibers at the end of the draw slot using an electrostatic charging unit 20 and 22 with oppositely directed components (each charging unit including an emitter device and a target device) (see Fig. 1), and collecting the fibers into a web on a moving surface 26.

Haynes '071 does not expressly teach providing a diffusion chamber.

Maggio '134 teaches providing a diffusion chamber 6 after the drawing slot 5.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Maggio '134's diffusion chamber with Haynes '071 nonwoven web process in order to adjust the width of the bundle of fibers and impact speed of the filaments on the receiving belt (see col. 3, lines 39-43).

Haynes '071 does not expressly teach having two or more oppositely directed electrostatic charging units such that at least one emitter device is configured on each side of the fibers so that an electrostatic charge is generated from opposite directions transverse to the direction of travel of the plurality of fibers.

Epstein teaches alternating the electrostatic charge from one side to another and back to the first side material (two or more oppositely directed electrostatic charging units such that at least one emitter device is configured on each side of the fibers so

Art Unit: 1791

that an electrostatic charge is generated from opposite directions transverse to the direction of travel of the plurality of fibers) (see figs. 7 and 8), and further that the particular placement and arrangement of electrodes is familiar to the ordinary artisan (see col. 3, lines 39-44).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Epstein into that of Haynes in order to provide the ability to vary the crimping to attain greater softness (Epstein, 3:3-6) into fabrics of Haynes '071, which are meant to touch the skin, such as socks (see Haynes '071, page 12, line 10).

With respect to Claim 3, Maggio '134's sidewalls are unvented (See Fig. 3, Ref. No. 15).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Haynes '071 (WO 02/52071) in view of Maggio '134 (WO 00/65134 A1; US Patent No. 6,966,762 B1 relied upon for translation and citations) and Epstein et al. (US Patent No. 3,052,009) as applied to Claim 1, and further in view of Trimble (WO 93/21370).

With respect to Claim 2, Haynes '071 and Maggio '134 teach a process of making a non-woven as previously described.

Haynes '071 and Maggio '134 do not appear to expressly teach having electrostatic charging units that are in a staggered configuration.

Trimble teaches making the electrostatic charging units locations staggered up and down rather than all in a single line (see Fig. 4, Ref. No. 74 and page 15, lines 24-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Trimble's charging unit positions with Haynes '071's and Maggio '134's non-woven web forming process in order to form a more even distribution of filaments in the web (see Trimble, page 20, lines 14-16) and because it is an alternative embodiment of a known charging unit configuration.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haynes '071 (WO 02/52071) in view of Maggio '134 (WO 00/65134 A1; US Patent No. 6,966,762 B1 relied upon for translation and citations) Epstein et al. (US Patent No. 3,052,009) as applied to Claim 1, and further in view of Haynes '379 (US Patent No. 6,117,379).

With respect to Claim 4, Haynes '071 and Maggio '134 teach a process of making a non-woven as previously described.

Haynes '071 and Maggio do not appear to expressly teach that the pneumatic attenuation force is provided by perturbed attenuation air.

Haynes '379 teaches using a bar arrangement 10 in front of airflow, which causes turbulent (perturbed) gas flow (see Haynes '379 col. 1, lines 62-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Haynes '379's bar arrangement in front of the air flow of the drawing chambers 16 of Haynes '071 and Maggio '134 in order to quench or cool via better penetration of the gas among the filaments (see Haynes '379 col. 1, lines 62-67). This would reduce time spent between die and slot for quenching or cooling because some or more quenching would occur inside the slot.



With respect to Claim 5, Haynes '071 and Maggio '134 teach a process of making a non-woven as previously described.

Haynes '071 and Maggio '134 do not appear to expressly teach at least one of the opposed diverging sidewalls comprises at least one vortex generator.

Haynes '379 teaches using a bar arrangement 10 in front of airflow, which causes turbulent (perturbed) gas flow (see Haynes '379 col. 1, lines 62-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Haynes '379's bar arrangement in front of the air flow of the (Maggio '134's) diffusion chamber 14 of Haynes '071 and Maggio '134 because it would cause gas flow turbulence (see Haynes '379 col. 1, lines 62-67), and it is desirous to slow down the air flow at the exit of the diffusion chamber in order to distribute the filaments randomly over a receiving belt (see Maggio '134, col. 1, lines 55-57).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maggio '381 (FR 2,825,381; US Patent No. 6,974,316 B2 relied upon for translation and citations) in view of Haynes '071 (WO 02/52071) and Epstein et al. (US Patent No. 3,052,009).

With respect to Claim 11, Maggio teaches providing a plurality of fibers F, subjecting the fibers to a pneumatic attenuation force in a drawing slot (see Fig. 3, at Ref. No. 13), reducing the velocity of the fibers in a diffusion chamber 6, subjecting the fibers to an applied electrostatic charge 17 while the fibers are in the diffusion chamber, and collecting the fibers on a moving web surface 7.

Maggio '381 does not appear to expressly teach each charging unit including an emitter device and a target device and at least one electrostatic charging unit is located upon each of the diverging sidewalls.

Haynes '071 teaches that subjecting the fibers to an electrostatic charging unit 18 and 22 with oppositely directed components (each charging unit including an emitter device and a target device) (see Fig. 1).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use Haynes '071's oppositely directed charging units in the diverging sidewalls of Maggio '381 in order to give improvements maximum overall voltage (see Haynes '071, page 16, Table 1), improve formation (page 16, lines 33-35), and because it is a known configuration for electrostatic charging.

Maggio '381 in view of Haynes '071 does not expressly teach having two or more oppositely directed electrostatic charging units such that at least one emitter device is configured on each side of the fibers so that an electrostatic charge is generated from opposite directions transverse to the direction of travel of the plurality of fibers.

Epstein teaches alternating the electrostatic charge from one side to another and back to the first side material (having two or more oppositely directed electrostatic charging units such that at least one emitter device is configured on each side of the fibers so that an electrostatic charge is generated from opposite directions transverse to the direction of travel of the plurality of fibers) (see figs. 7 and 8), and further that the particular placement and arrangement of electrodes is familiar to the ordinary artisan (see col. 3, lines 39-44).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Epstein into that of Maggio '381 in order to provide the ability to vary the crimp to produce greater softness (Epstein, 3:3-6).

Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmit (WO 02/34990 A1; USPAP 2004/0028763 A1 relied upon for translation and citations) in view of Epstein et al. (US Patent No. 3,052,009).

With respect to Claim 11, Schmit teaches forming fibers [0004], subjecting the fibers to pneumatic attenuation force in a drawing slot, the attenuation force imparting a velocity to the fibers [0004], reducing the velocity of the fibers in a diffusion chamber formed between opposed diverging sidewalls [0004], subjecting the fibers to an applied electrostatic charge while the fibers are in the diffusion chamber by one electrostatic charging unit with oppositely directed components 11 and 8, with 11 located upon a diverging sidewall 15 and 8 located on the other diverging sidewall 14 (each charging unit including an emitter device and a target device) (see [0006], [0020], [0021], and fig. 2 and 3), and collecting the fibers into a web on a moving forming surface (see Fig. 1, Ref. No. 7).

Schmit does not expressly teach having two or more oppositely directed electrostatic charging units such that at least one emitter device is configured on each side of the fibers so that an electrostatic charge is generated from opposite directions transverse to the direction of travel of the plurality of fibers.

Epstein teaches alternating the electrostatic charge from one side to another and back to the first side material (having two or more oppositely directed electrostatic charging units such that at least one emitter device is configured on each side of the fibers so that an electrostatic charge is generated from opposite directions transverse to the direction of travel of the plurality of fibers) (see figs. 7 and 8), and further that the particular placement and arrangement of electrodes is familiar to the ordinary artisan (see col. 3, lines 39-44).

It would have been prima facie obvious to one of ordinary skill in the art at the time of the invention to incorporate the method of Epstein into that of Schmit in order to provide the ability to vary the crimp to produce greater softness (Epstein, 3:3-6).

With respect to Claim 15, Schmit teaches that the diffusers can have no openings (unvented) (see [0010]. Though Schmit states “preferably” with respect to having vents, this is merely a preferred embodiment.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maggio ‘381 (FR 2,825,381; US Patent No. 6,974,316 B2 relied upon for translation and citations) in view of Haynes ‘071 (WO 02/52071) and Epstein et al. (US Patent No. 3,052,009) as applied to Claim 11, and further in view of Trimble (WO 93/21370).

With respect to Claim 13, Maggio ‘381 teaches a process of making a non-woven as previously described.

Maggio ‘381 does not appear to expressly teach having one electrostatic charging unit located substantially closer to the diffusion chamber than at least one other electrostatic charging unit.

Trimble teaches making the electrostatic charging units locations staggered (substantially closer to the diffusion chamber than at least one other electrostatic charging unit) (see Fig. 4, Ref. No. 74 and page 15, lines 24-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Trimble's charging unit positions with Maggio '381's non-woven web forming process in order to form a more even distribution of filaments in the web (see Trimble, page 20, lines 14-16) and because it is an alternative embodiment of a known charging unit configuration.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmit (WO 02/34990 A1; USPAP 2004/0028763 A1 relied upon for translation and citations) in view of Epstein et al. (US Patent No. 3,052,009) as applied to Claim 11, and further in view of Trimble (WO 93/21370).

With respect to Claim 13, Schmit teaches a process of making a non-woven as previously described.

Schmit does not appear to expressly teach having one electrostatic charging unit located substantially closer to the diffusion chamber than at least one other electrostatic charging unit.

Trimble teaches making the electrostatic charging units locations staggered (substantially closer to the diffusion chamber than at least one other electrostatic charging unit) (see Fig. 4, Ref. No. 74 and page 15, lines 24-27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Trimble's charging unit positions with Schmit's non-

Art Unit: 1791

woven web forming process in order to form a more even distribution of filaments in the web (see Trimble, page 20, lines 14-16) and because it is an alternative embodiment of a known charging unit configuration.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maggio '381 (FR 2,825,381; US Patent No. 6,974,316 B2 relied upon for translation and citations) in view of Haynes '071 (WO 02/52071) and Epstein et al. (US Patent No. 3,052,009) as applied to Claim 11 above, and further in view of Haynes '379 (US Patent No. 6,117,379).

With respect to Claim 14, Maggio '381 teaches making a nonwoven web as previously described but does not appear to expressly teach that the pneumatic attenuation force is provided by perturbed attenuation air.

Haynes '379 teaches using a bar arrangement 10 in front of airflow, which causes turbulent (perturbed) gas flow (see Haynes '379 col. 1, lines 62-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Haynes '379's bar arrangement in front of the air flow of the Maggio '381 in order to quench or cool via better penetration of the gas among the filaments (see Haynes '379 col. 1, lines 62-67). This would reduce time spent between die and slot for quenching or cooling because some or more quenching would occur inside the slot.

Claims 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmit (WO 02/34990 A1; USPAP 2004/0028763 A1 relied upon for translation

Art Unit: 1791

and citations) and Epstein et al. (US Patent No. 3,052,009) as applied to Claim 11, and further in view of Haynes '379 (US Patent No. 6,117,379).

With respect to Claim 14, Schmit teaches a process of making a non-woven as previously described.

Schmit does not appear to expressly teach that the pneumatic attenuation force is provided by perturbed attenuation air.

Haynes '379 teaches using a bar arrangement 10 in front of airflow, which causes turbulent (perturbed) gas flow (see Haynes '379 col. 1, lines 62-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Haynes '379's bar arrangement in front of the air flow of the slot of Schmit in order to quench or cool via better penetration of the gas among the filaments (see Haynes '379 col. 1, lines 62-67). This would reduce time spent between die and slot for quenching or cooling because some or more quenching would occur inside the slot.

With respect to Claim 16, Schmit teaches a process of making a non-woven as previously described.

Schmit does not appear to expressly teach that at least one of the opposed diverging sidewalls comprises at least one vortex generator.

Haynes '379 teaches using a bar arrangement 10 in front of airflow, which causes turbulent (perturbed) gas flow (see Haynes '379 col. 1, lines 62-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Haynes '379's bar arrangement in front of the air flow of

Art Unit: 1791

the from the lateral openings<sup>16</sup> of the diffusion chamber 14 of Schmit because it would cause gas flow turbulence (see Haynes '379 col. 1, lines 62-67), which would spread the fiber curtain, it is desirous to spread the curtain since it increases uniformity of the web (see Schmit [0004]).

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maggio '134 (WO 00/65134 A1; US Patent No. 6,966,762 B1 relied upon for translation and citations) in view of Davis et al. (US Patent No. 6,660,218 B2).

With respect to Claim 23, Maggio '134 teaches providing a plurality of fibers F, subjecting the fibers to an attenuation force in a drawing slot (at Fig. 3, Ref. No. 13), subjecting the fibers to a electrostatic charging unit 11 located on the sidewall, reducing the velocity of the fibers in a diffusion chamber being formed substantially between opposed diverging sidewalls 15, and collecting the fibers onto a web of a moving surface 7.

Maggio '134 does not appear to expressly teach providing attenuation force by providing air consisting of attenuation air only entering the drawing slot from the drawing slot sidewall.

Davis teaches providing air from a nozzle to direct filaments with one air nozzle (attenuation air only entering the drawing slot from one slot sidewall) (see col. 1, lines 37-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Davis's attenuation air supply configuration from a slot sidewall with Maggio '134's teaching of attenuation in order to minimize cost of supplied



Art Unit: 1791

plant air and to minimizing non-uniformity in the laydown process (see Davis, col. 1, lines 14-34). Moreover, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine Davis's use of the attenuation to direct the filaments (see Davis, col. 1, lines 37-51) with the air toward Maggio's electrostatic charging unit 11 because Davis provides additional direction control to achieve Maggio's process of subjecting the filaments to the charging unit 11.

### ***Response to Arguments***

Applicant's arguments filed 12 December 2008 have been fully considered but they are not persuasive.

Applicant argues with respect to the 35 USC § 112, first paragraph, rejections. Applicant's arguments appear to be on the grounds that:

1) The specification precludes attenuation air from any sidewall other than the one opposite the electrostatic charging unit.

Applicant argues with respect to the 35 USC § 103 rejections. Applicant's arguments appear to be on the grounds that:

2) Epstein merely relates to crimping a continuously running solitary filament. There purpose of Epstein is contrary to purpose of the charging units of Haynes '071 of fiber separation and a desired directional distribution on the web forming surface.

3) Trimble, Haynes '071, Haynes '739, Maggio '134, and Maggio '381 do not make up for the deficiencies of Epstein not teaching having two or more oppositely directed electrostatic charging units such that at least one emitter device is configured

Art Unit: 1791

on each side of the fibers so that an electrostatic charge is generated from opposite directions transverse to the direction of travel of the plurality of fibers.

4 and 7) The sidewall of Haynes '379 has vortex generating sidewalls converging rather than diverging.

5) Schmit only has a single charging unit. Thus, the claimed limitation of two units is not met.

6) Schmit fails to teaching the claimed limitation of Claim 15 of unvented sidewalls since "preferably" does not provide for no lateral openings.

8) The electrostatic discharge unit of Maggio '134 located beneath the diffuser or in the diffuser fails to meet the claimed limitation of an electrostatic charging unit located on one of the drawing slot sidewalls.

9) Davis's air nozzle 32 does not occur in a drawing slot as required by Claim 23.

The Applicant's arguments are addressed as follows:

1) Applicant's arguments cite the Specification is ways that are represented and interpreted above in the Claim Rejections - 35 USC § 112 section. The specification only requires attenuation air from the sidewall opposite the electrostatic charging unit. The specification does not preclude additional attenuation air from being present. Even if the specification is held to indicate only one sidewall providing attenuation air, the specification does not preclude any other source of attenuation air as claimed with the closed claim language of "consisting."

Art Unit: 1791

2) Epstein's teachings of a charging unit incorporates the filament crimping and resulting softness of Epstein (see Epstein, col. 3, lines 3-8) into fabrics of Haynes '071, which are meant to touch the skin, such as socks (see Haynes, page 12, line 10).

2) Although Applicant's arguments with respect to individual fiber crimping being contrary to fiber separation and directional distribution, the arguments of counsel cannot take the place of evidence in the record.

3) Epstein teaches the claimed limitation of alternating electrostatic charging units as recited above:

Epstein teaches alternating the electrostatic charge from one side to another and back to the first side material (two or more oppositely directed electrostatic charging units such that at least one emitter device is configured on each side of the fibers so that an electrostatic charge is generated from opposite directions transverse to the direction of travel of the plurality of fibers) (see figs. 7 and 8), and further that the particular placement and arrangement of electrodes is familiar to the ordinary artisan (see col. 3, lines 39-44).

4) Maggio '134 teaches the claimed sidewall configuration by providing a diffusion chamber 6 after the drawing slot 5.

5) As recited above:

Epstein teaches alternating the electrostatic charge from one side to another and back to the first side material (having two or more oppositely directed electrostatic charging units such that at least one emitter device is configured on each side of the fibers so that an electrostatic charge is generated

from opposite directions transverse to the direction of travel of the plurality of fibers) (see figs. 7 and 8),

6) All the teachings of Schmit are relied upon including the recitation of the preferable presence of openings. Thus, Schmit teaches that the diffusers can have no openings (unvented) (see [0010]. Though Schmit states “preferably” with respect to having vents, this is merely a preferred embodiment.

7) Schmit teaches diverging sidewall 15 and diverging sidewall 14 (see fig. 1).

8 and 9) The air is provided above the diverging walls in Maggio ‘134, and the slowing occurs between the diverging walls (see col. 5, lines 44-48). Thus, the slot of fast-moving air above the diverging walls would continue to pull the filaments. Thus, Maggio's providing of air necessarily occurs within a drawing slot.

9) Absent evidence of record to the contrary, Davis is relied upon for all of its teachings. The arguments of counsel cannot take the place of evidence in the record.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 1791

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick Butler whose telephone number is (571) 272-8517. The examiner can normally be reached on Mon.-Thu. 7:30 a.m.-5 p.m. and alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571) 272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1791

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. B./  
Examiner, Art Unit 1791

/Christina Johnson/  
Supervisory Patent Examiner, Art Unit 1791